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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,343	08/01/2003	John B. Letts	P02030US2A(336)	3593

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EXAMINER
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COONEY, JOHN M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/632,343

Applicant(s)

LETTS ET AL.

Examiner

John m. Cooney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7, 10-12, 16-18 and 21-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 10-12, 16-18 and 21-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

Applicant's arguments filed 7-11-05 have been fully considered but they are not persuasive.

Rejection under 35 USC 112 pertaining to the blowing agent are hereby withdrawn in light of applicants' amendments.

The following rejections are set forth or maintained in light of applicants' amendments:

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

When appended to an otherwise definite expression, "type" so extends the scope of the expression as to render it objectionably indefinite. Appropriate correction is required.

Applicants' arguments have been considered, but rejection is maintained for the reasons set forth above. It can not be determined what degree of scope beyond the particular method which is being recited in the claim.

Claims 1-4, 6, 7, 10-12, 21-24 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims are confusing as to intent because it can not be determined what value pertaining the Bunsen Coefficient is intended. The recitation of the limitation pertaining to the Bunsen Coefficient in claims 1 and 10 do not parallel the limitation recited in claim 16.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 7, 10-12, 16-18, and 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raynor et al.(3,882,052) in view of Volkert et al.(5,278,195).

Raynor et al. discloses preparations of isocyanate-based rigid foams prepared by contacting streams of isocyanate component and a polyol component wherein contacting takes place in the presence of blowing agent and nitrogen gas to enhance the foaming action and wherein the materials are applied to a surface which meet the criteria of "laminator" as defined by the claims (see the entire document).

Raynor et al. differs from applicants' claims in that amounts of nitrogen gas employment to reach the claimed Bunsen Coefficient values are not particularly disclosed. However, Raynor et al. discloses wide variation contents of nitrogen (see column 4 lines 15-32) for the purposes of providing acceptable foams for their invention. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the nitrogen gas of Raynor et al. over the wide ranges of amounts contemplated by the teachings of Raynor et al. for the purpose of providing its acceptable foam forming effect in order to arrive at the processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. Raynor et al. is not seen to be limited to the particularly recited low content values recited in their disclosure, and, in fact, Raynor et al. particularly recites that higher concentrations may be employed.

Raynor et al. teaches control of the flow rates of its reactants (see column 6 line 65 et seq.), but the disclosure differs from applicants' claims in that it is concerned with the formation of polyurethane foams. However, Volkert et al. discloses that control in the relative amounts of reactive materials dictates formation of isocyanurate foam products rather than polyurethane foam products when preparing isocyanate based foams (see column 17 lines 17-35, as well as, the entire document). Additionally, Volkert et al. teaches the motivation of achieving increased flame retardancy as one reason to desire such a modulation in reactant amounts. Accordingly, it would have been obvious for one having ordinary skill in the art to have modified NCO indexes in the manner taught by Volkert et al. within the practice of the processes of Raynor et al.

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for the purpose of increasing fire retardancy in the articles realized in order to arrive at the processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Raynor et al. differs from the claims in that it does not require alkane blowing agents, additionally or to the exclusion of haloalkanes, as submitted in the new claims. However, Volkert et al. discloses alkanes (see column 10 lines 42-46) for their foaming effect in related isocyanate based formulations. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the alkanes disclosed by Volkert et al. within the teachings of Raynor et al. for the purpose of providing acceptable foam forming effects in order to arrive at the processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Applicants' additional limitations regarding addition of nitrogen to supply streams is held to be within teachings readily envisioned by Raynor et al.'s disclosure of preparing their preparations through any suitable apparatus.

Applicants' arguments have been considered, but rejection is maintained for the reasons set forth above. Distinction based on the Bunsen Coefficient values of the claims is not seen to be supported by a showing of new or unexpected results attributable to the nitrogen content values as claimed.

Claim s 1-4, 6, 7, 10-12, 16-18, and 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wishneski et al.(5,264,464) in view of Volkert et al.(5,278,195).

Wishneski et al. discloses preparations of isocyanate-based rigid foams prepared by contacting streams of isocyanate component and a polyol component wherein contacting takes place in the presence of blowing agent and nitrogen gas to enhance the foaming action and wherein the materials are applied to a surface which meet the criteria of "laminator" as defined by the claims (see the entire document).

Wishneski et al. differs from applicants' claims in that amounts of nitrogen gas employment to reach the claimed Bunsen Coefficient values are not particularly disclosed. However, Wishneski et al. discloses particular desirability to dissolve nitrogen in the contents of their methods (see column 7 lines 28-41) for the purposes of providing acceptable foams for their invention. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed varied contents of the nitrogen gas of Wishneski et al. within the teachings of Wishneski et al. for the purpose of providing its acceptable foam forming effect in order to arrive at the processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Wishneski et al. teaches control of the flow rates of its reactants (see column 9 lines 32-34), but the disclosure differs from applicants' claims in that it is concerned with the formation of polyurethane foams. However, Volkert et al. discloses that control in

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the relative amounts of reactive materials dictates formation of isocyanurate foam products rather than polyurethane foam products when preparing isocyanate based foams (see column 17 lines 17-35, as well as, the entire document). Additionally, Volkert et al. teaches the motivation of achieving increased flame retardancy as one reason to desire such a modulation in reactant amounts. Accordingly, it would have been obvious for one having ordinary skill in the art to have modified NCO indexes in the manner taught by Volkert et al. within the practice of the processes of Wishneski et al. for the purpose of increasing fire retardancy in the articles realized in order to arrive at the processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Wishneski et al. differs from the claims in that it does not require alkane blowing agents, additionally or to the exclusion of haloalkanes, as submitted in the new claims. However, Volkert et al. discloses alkanes (see column 10 lines 42-46) for their foaming effect in related isocyanate based formulations. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the alkanes disclosed by Volkert et al. within the teachings of Wishneski et al. for the purpose of providing acceptable foam forming effects in order to arrive at the processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. Additionally, it is prima facie obvious to substitute equivalents, motivated by the reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances. *In re Ruff* 118 USPQ 343; *In re Jezel* 158 USPQ 99; the express suggestion to substitute one equivalent for



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another need not be present to render the substitution obvious. *In re Font*, 213 USPQ 532.

Applicants' additional limitations regarding addition of nitrogen to supply streams is held to be within teachings readily envisioned by Wishneski et al.'s disclosure of preparing their preparations through any suitable apparatus.

Applicants' arguments have been considered, but rejection is maintained for the reasons set forth above. Distinction based on the Bunsen Coefficient values of the claims is not seen to be supported by a showing of new or unexpected results attributable to the nitrogen content values as claimed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

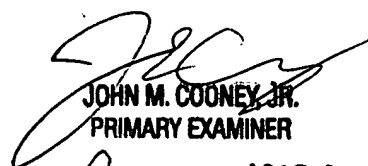
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JOHN M. COONEY JR.  
PRIMARY EXAMINER  
Group 1700